



CHATS-AS 2019

CHATS on Applied Superconductivity Workshop

Szczecin, Poland

9 – 12 July 2019

FIRST ANNOUNCEMENT AND CALL FOR PAPERS

INTRODUCTION: The CHATS-AS 2019 Workshop will be held on 9-12 July 2019 (including Wendelstein 7-X tour in the last day), hosted by the Faculty of Mechanical Engineering and Mechatronics of the West Pomeranian University of Technology, Szczecin (WPUT).

OBJECTIVE AND TOPICS: CHATS-AS 2019 will be the 13th in a series of international workshops that have followed the advancements in the state-of-the-art of modeling of superconducting systems, from cables to magnets and other devices used for power generation and transmission, fusion, high-energy physics as well as other applications. CHATS-AS is focused on novel principles and tools in engineering design and analysis of superconducting systems. The Workshop also aims at building bridges between modeling and experiments, in order to validate the sophisticated analysis tools available with proper data sets. The CHATS-AS 2019 welcomes contributions fitting this scope, with a particular interest in the following topics:

- Quench simulation and analysis for all classes of LTS and HTS magnets (e.g. accelerator, fusion, MRI/NMR, and other applications) and devices (e.g. power cables).
- Quench detection and protection of HTS magnets: novel concepts, models and experiments.
- Electro-mechanical modeling of Nb₃Sn and HTS magnets.
- Multi-scale modeling of cables and magnets made of LTS and HTS materials, and their relation to the strand or short-sample performance.
- Simulation and optimization of large-scale superconducting and cryogenic systems, covering the combination of thermo-hydraulics, AC loss, current distribution, field quality, and operating margin calculations.
- Modeling in support of the design and development of cryocoolers, and conduction-cooled superconducting devices.

KEY DATES AND DEADLINES

1 January 2019: Abstract submission opening
15 February 2019: Pre-registration and deadline for abstracts submission
31 March 2019: Abstract acceptance notification
9 June 2019: Registration deadline

PUBLICATION: It is foreseen, that selected papers presented at the Workshop will be published in a special issue of *Cryogenics* after the standard peer review and editorial procedure.

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Local Organizing Committee: Monika Lewandowska (WPUT), Dariusz Bocian (IFJ PAN, Cracow), Mirosław Pajor (WPUT)

Program Steering Committee: Naoyuki Amemiya (Kyoto University, Japan), Luca Bottura (CERN, Switzerland), Marco Breschi (University of Bologna, Italy), Reinhard Heller (KIT, Germany), Cesar Luongo (ITER Organization, France), Philippe Masson (University of Houston, USA), Daisuke Miyagi (Tohoku University, Japan)

General information on CHATS-AS: <https://chats-as.web.cern.ch/chats-as/>